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ABSTRACT

This packet contains three papers on self-directed and incidental learning from a symposium on human resource development (HRD). The first paper, "Self-Directed Learning for Supervisory Development" (Judy O'Neil, Maria Lamattina), reports on a study that looks at what research says needs to be in place to engage workers in self-directed learning and help them understand how such learning can strengthen their individual performance. Results showed a focus on better self-understanding was useful, but that the literature did not sufficiently emphasize the need for connections between self-directedness and job performance. The second paper is a "Case Study of an Advanced Technology Business Incubator as a Learning Environment" (Mary Wilson Callahan), which investigated incidental learning that bridges the gap when individuals are linked through economic development centers to create innovative new businesses. The theoretical framework included professional culture, informal and incidental learning, boundary-spanning, and resource linkage. Analysis of 82 critical learning incidents yielded findings in both functional and bridging learning, highlighting the role of context design. The final paper, "Independent Workforce Theory: Implications for HRD" (Jules K. Beck), contends that advancements of technology, coupled with the globalization of industrial and commercial activity, is empowering a highly educated, independent workforce, significantly altering the relationship between management and labor. The papers contain reference sections. (KC)

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2000 AHRD Conference

Self-directed and Incidental Learning

Symposium 26

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Self-Directed Learning for Supervisory Development

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Ongoing change in organizations has resulted in the need for self-directed, resilient workers and renewed attention to self-directed learning. This study looks at what research says needs to be in place to engage workers in self-directed learning and help them understand how such learning can strengthen their individual performance. Results showed a focus on better self-understanding was useful, but that the literature did not sufficiently emphasize the need for connections between self-directedness and job performance.

Keywords: Self-directed learning, Self-directed workers, Supervisor development

The rapidly changing business environment has created the need for self-directed, resilient workers who can and do take control of their own learning and development. Such workers have recently been dubbed 'free agent learners' (Caudron, 1999), renewing interest in the aspect of adult learning referred to as self-directed learning.

Problem Statement and Theoretical Framework:

Guglielmino & Guglielmino (1988) name several factors from the changing work environment that could serve to promote the need for self-directed learning in business and industry:

- the impact of the information explosion and the resultant need for workers to manage the volume of such constantly changing information
- the fact that workers face, now more than ever, the danger of obsolescence and technological displacement if they don't find ways to continually learn
- companies wanting more worker involvement, which has strong connections to an environment that would support self-directed learning.

Earlier research by Schreier (1984), and more recent research by Long and Morris (1996) shows that organizations appear to be taking the need for self-directed learning seriously. Long and Morris found almost sixty articles and papers, published between 1983 and 1993, on self-directed learning in business and industry. They concluded that self-directed learning was increasingly becoming a part of the workplace.

The concept of self-directed learning has been defined and described in a number of different ways (Brookfield, 1988; Candy, 1991; Knowles, 1975; Long 1988; Tough 1979). Caffarella in Brockett et al (1994) feels that for the research agenda on self-directed learning to move forward, some grounding is necessary for these diverse theoretical perspectives. She has identified three key themes from the literature for this purpose:

"1. recognition and examination of processes through which learners engage in self-directed learning,
2. definition and debate regarding the salient characteristics and preferences of adult learners, and
3. identification of ways to foster initiative and learner control in formal institutional settings" (p. 428).

Past research has looked at aspects of each of these themes. There has been a significant amount of quantitative research on the nature of adult's self-directed learning projects (Tough, 1979) and on the identification and measurement of self-directed learning attributes (Long and Redding, 1991). There have also been more recent qualitative studies. Cavaliere (1992) has used the analysis of case studies to better understand conceptual learning processes in self-directed learning. Kops (1993, 1997) used semi-structured interviews to look at the self-directed learning efforts made by managers in public and private sector organizations to try to identify the influence of company policies and practices. Most of this research has looked at situations in retrospect— after the worker is involved in self-directed learning (Kops, 1997; Tough, 1979) or as case studies of existing self-directed learning efforts in organizations (Gould, 1997; King, 1996).

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Given the previously identified need for more self-directed, resilient workers in organizations, the problem is the lack of research that looks at how to begin this process, that is, how Human Resource Development professionals might design a process to introduce workers in a traditional, hierarchical organization to the concept of self-directed learning and encourage them to make greater use of self-directed learning for their development and improvement of their job performance.

Research Questions

How can Human Resource Development professionals design a process that will enable supervisors, in a traditional organizational setting, to become self-directed learners for their ongoing development, thus strengthening their individual performance and their contribution to the organization for which they work?

What should the design of the process include?

How can supervisors be encouraged to engage in self-directed learning?

How can supervisors better understand their own development needs?

Organizational Setting

The company is a major electric and gas utility in the northeastern U.S. It is currently going through state-mandated deregulation, necessitating restructuring of the business lines and a shifting theory of the business. With the move away from a regulated, "cost plus" business comes the need for long term employees to change their worldview and acquire new competencies. The organization has traditionally attracted security-minded individuals seeking lifetime employment. Though they are well aware of the fact that the rules of the game have changed, and can articulate this fact, they are still unsure of what new behaviors will be required of them.

The company's former leadership development process, though recently designed, had a fairly traditional, skills-based focus with an emphasis on traditional supervisory skills. In 1999, a learning strategy was developed for the organization that focused on building self-awareness and the ability to be more deliberate about learning from day-to-day experience. The integration of a new model of career management with learning, as well as greater differentiation between training and learning, were critical aspects of the strategy. Based on this, a new leadership development process was designed with participants being introduced to the concept of self-directedness, with self-awareness being key to understanding themselves and those with whom they work.

Methodology

Study Population

The pilot for this new process included 12 first line supervisors with a minimum of one year of supervisory experience. Among the 12 participants there was diversity in age, gender, race and length of service. All participants had at least five years of service. All participants were not able to attend the full process.

Data Collection and Analysis

This was a two-part study. The first part of the study was a review of the relevant literature (Danis & Tremblay, 1988) to identify the important concepts that needed to be included in a process that would encourage supervisors to be self-directed in their development. Some of the research included what makes some learners self-directed and others not (Guglielmino & Guglielmino, 1991; Long & Redding, 1991); how people can be developed to become self-directed learners (Clardy, A., 1998; Guglielmino & Guglielmino, 1988); and the results of attempts to institute self-directed learning within other varied organizations (Baskett, 1996; Strickland, 1996).

A content analysis was performed on this review (Weber, 1990) looking for concepts that consistently appeared throughout the literature. Based on the outcome of this analysis, a process was designed to introduce supervisors to the use of self-directed learning for their ongoing development. The process included two 2-day sessions spaced one month apart, a two hour 1-1 360 feedback session, and a two hour learning group session.

The second part of the study used evaluation feedback surveys and semi-structured interviews to determine how well the developed process worked, how well supervisors had understood their own development needs, and how self-directed they were in meeting those needs and improving their performance.

Analysis of this data was done using a descriptive framework derived from the areas identified in the literature review (Robson, 1993). This descriptive framework was inclusive of the topics covered in the design of the four-day plus process.

Findings and Discussion

The process for helping supervisors become self-directed was designed and piloted in the summer and fall of 1999. The design of the process is illustrated in Table 1.

Table 1 – Self-directed Development Process

Day 1	AM Introduction and ice-breaker 21st Century Workplace Know your Skills - Part I	PM Know your Skills - Part II Invest in your Values New Employment Relationship Business Competency Model
Day 2	Learning Styles – Part I	Learning Styles – Part II Self-directed Learning 360 degree Feedback Orientation
Day 3	Myers-Briggs Type Indicator – Part I	Myers-Briggs Type Indicator – Part II 360 degree Feedback
Day 4	Development Plan	Development Plan
Follow-up	Two hour 1-1 360 Feedback Session	
Follow-up	Two hour Learning Group Session	

Table 2 shows the findings from the literature review analysis, how those findings were translated into elements in the process, and the results from the surveys and interviews about the process including participant comments.

Table 2 – Results of Process

Findings from Literature Review	Design Elements of Process	Results from Surveys and Interviews Including Participant Comments
Self-direction in learning does not necessarily mean learning alone. (Allen, 1997). The learner should be able to interact with a facilitator/teacher and other learners (Brookfield, 1985; Heimstra, 1994).	Two 2-day sessions attended by 10-12 participants and led by two facilitators. Icebreaker to allow 1 – 1 discussions among participants focusing on the strengths they possessed.	The format of the icebreaker served the purpose of creating an atmosphere where learners felt comfortable in working together. The content began the start of the focus on self-assessment of skills. "Good icebreaker, the more I talked the more good points I identified with."
The learner may not be able to initially assess his/her own needs (Allen, 1997). Some of the needs to be assessed in connection with the process should focus	Participants used several instruments, with help from the facilitators as needed, to self-assess and develop a better understanding of themselves and their	

on a high level of self-understanding. This can include assessments of personality type and personal values—determining if they are congruent with organizational values (Bagshaw, 1997; Walker & Long, 1997). Management and job related skills also need to be assessed (Kops, 1997).	needs. In addition, there were exercises used to deepen self-understanding. Data gleaned from all these sources was used to create a development plan.	
	Know your Skills	There was some confusion with the skills'assessment, but participants felt they learned about skills they possessed, how the skills were being used, and what needed further development. "I learned what skills I need to improve my self-worth."
	Invest in your Values	The values'assessment was considered extremely useful for both ongoing self-development as well as an understanding of other's differing values. "I'll use this information everyday to improve myself and my department."
	A business competency assessment tool was introduced so that participants could also ascertain their "hard skill" needs.	While some participants felt they had previously received similar information, they found it useful. "This model let me step back and take a better look at things."
	The organization's 360 degree feedback process was employed as yet another instrument for raising self-awareness, in this case, in relation to the organization's espoused values.	Initially, the 360 degree feedback process, which is relatively new to the organization, generated the most concern, due to issues with confidentiality and discomfort with receiving feedback, but all were willing to try it. "I'm not enthusiastic about receiving feedback, but will see how it works out." Once the feedback was received, participants recognized its value to their development. "It identified those areas of concern to be addressed."
	Myers-Briggs Type Indicator	As with other assessments, the MBTI provided insights about not only themselves but others as well. "Helps me understand individuals as to why they act/react to various issues the way they do, allowing me to respond in a manner they are more receptive to."
It is important for learners to understand their learning style preferences (Clardy, 1998). There appear to be links between different learning styles and how much	Participants used a learning style assessment, with help from the facilitators as needed, so they would better understand how they learn. In	Participants felt the process helped them to identify their own areas of strengths and areas for development. "It gave me a

individuals will benefit from, and adapt to, self-directed learning (Brockett & Heimstra, 1985; Caffarella & ODonnell, 1988).	addition, there were several exercises used to address differences in styles. The result of the assessment was used in helping to create a development plan.	direction where to start and where to place the most emphasis." Equally important, it helped them understand there are differences in how people learn. This has affected their style of teaching/coaching subordinates as well as understanding why certain learning situations are more valuable to them than others.
Learners have varying degrees of readiness for self-directed learning. It may be possible to assess/predict readiness through instruments. Differences in readiness should be addressed through training to increase readiness and differences in strategies used with learners (Brookfield, 1988; Caffarella & ODonnell, 1988; Guglielmino & Guglielmino, 1988; Heimstra & Burns, 1997).	Participants used a self-directed learning assessment, with help from the facilitators as needed, so they would better understand where they were on the continuum of self-directedness. The result of the assessment was used in helping to create a development plan. In addition, there were several exercises used to help increase readiness.	The assessment began to help participants understand the concept of, and the need to develop skills for, self-direction. "I am not a very strong self-directed learner, but that can be improved." Only a few participants, however, were also able to make the connection between being self-directed and strengthening job performance.
Having an individual development plan helps provide a clear sense of direction for the learner (Kops, 1997). To develop and carry through on development, learners need access to more flexible, non-traditional forms of learning. They need ideas for development opportunities and non-training experiences. They need time to develop and the empowerment to act (Bagshaw, 1997; Clardy, 1998).	Participants created an individual development plan with help from the facilitators as needed. This plan was later reviewed with the participant's manager for additional input. A comprehensive resource guide of traditional and non-traditional development experiences was provided to each participant.	Participants noted how much information went into actually formulating a development plan. Traditionally, they were told or chose to attend something because it was included in a goal and not because they had a specific need to address. Also, what they learned and how they learned it was the decision of their manager. "Now I know that I dont learn the same way he does and I can explain why I need to find a different way to acquire the skills my manager wants."
The learner should understand and buy-in'to the need for self-direction (Clardy, 1998; Kops, 1997; Strickland, 1996).	In discussion of the need to be self-directed, organizational as well as individual, rationales were presented. Topics included setting a context through discussion of the 21st century workplace needs and a new employee relationship with the organization.	Participants felt they learned intellectually about 21st century workplace trends. Many felt that connections from these trends to their development needs, individual work lives, and job performance were not clear. "I have an understanding of the trends, but what are the priorities?" Participants understood their new relationship with the company involved dealing with constant change and that there is a need for continual learning to keep up with that change. "There are no roadmaps, one must continue to develop those skills required to meet ongoing changes."

		Some participants expressed that the process did not meet their expectations. Others indicated they were sent to the process by their managers without understanding what the process was about. "My expectations not met, I wasn't sure what the class was about."
The organization needs a clear vision of its requirements for self-direction. It needs to strongly support development and the self-directed effort and see development as wider than the present job. Top management needs to be viewed as paying attention to learning and as role models (Baskett, 1993; Clardy, 1998)	This area was not explicitly addressed in the process.	Some participants expressed concern about the lack of management support. "I hope my manager understands the importance and the need to attend this class." "The 360 degree feedback shows that my manager is the only person who sees certain behaviors as developmental needs -- he and I obviously need to talk about that – but how?"

The findings from the pilot have indicated both strengths and weaknesses in the design of the process. Strengths included the emphasis on self-assessment and self-understanding through such tools as the 360 degree feedback process, Honey-Mumford Learning Styles Questionnaire (Honey & Mumford, 1995); The Learning Preference Assessment (Guglielmino & Guglielmino, 1991); and the Myers-Briggs Type Indicator (Myers, 1998). These assessments were all valued by participants because they provided not only self-assessment, but also additional insights into how supervisors relate to and manage their employees.

The 360 degree feedback and the MBTI were repeatedly named as most valuable during the interviews. The 360 degree feedback was seen by participants as most valuable because it directly related to behaviors upon which their performance is evaluated. It also provided multiple perspectives of their skills and abilities. The MBTI was most valued because it provided the greatest understanding of why they are who they are, and gave them similar insight into others.

Weaknesses included a need for greater emphasis on the connections among value-added job performance, self-directedness and self-directed learning. While participants understood the concept of self-directed learning, few made the explicit connection between their ability to improve their job performance, their contributions to the company and self-directed learning. They saw it as a way to gain some control over their time and learning, "I am most productive when I am in control of my time and resources", but they did not connect self-directedness with the way they would need to deal with future organizational changes. Some participants continued to feel that they needed more traditional training to meet their needs, "Would like training, some communication skills".

An additional weakness was found because the needs for strong organizational vision and support were not explicitly addressed in the process. The learning strategy discussed earlier in the paper was not fully communicated. Also, sponsorship in the organization is not considered to be philosophical. Participants in a program need to see the actual presence of a sponsor and this was missing from the process. As a result, participants expressed concern about possible lack of management support.

Drucker (1999) says that knowledge workers face drastically new demands in the 21st century. Some of what he says reinforces the needs of our self-directed, resilient supervisors:

"1. They have to ask: Who Am I? What Are My Strengths? How Do I Work?

2. They have to ask: Where Do I Belong?

3. They have to ask: What Is My Contribution?" (p. 164).

Despite some of the weaknesses, initial findings demonstrate that the literature and research on self-directed learning can provide a good basis from which organizations can draw to design processes that will foster and encourage self-directedness. Self-assessment can help these supervisors answer Drucker's questions of "Who am I? and What are my strengths?". Supervisors from the pilot have begun creating and implementing detailed, focused development plans which can help them determine "Where do I belong? and What is my contribution?".

To strengthen the process, additional emphasis needs to be placed on being explicit about how being self-directed is connected to a supervisor being able to strengthen his/her individual performance and contributions to the organization. In addition, the organization needs to get clearer about its support of supervisors acting as self-

directed, resilient employees. It needs to provide more explicit communication about its vision for these employees and more active sponsorship of their efforts.

Contributions to HRD

Human Resource Development professionals can feel confident in drawing from existing research for their work in developing self-directed, resilient supervisors. It is important, however, to have a strong focus on the rationale for using self-directed learning as a means to this development. For supervisors to devote the time to self-directed learning, it cannot be viewed as an end in itself. It needs to be viewed as a means to self-directedness and resiliency— the end result being a self-managed knowledge worker for the 21st century.

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Case Study of an Advanced Technology Business Incubator as a Learning Environment

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Successful technological innovation requires collaboration between entrepreneurs and business investors, often inhibited by socialization into diverse professional cultures. This case study investigated incidental learning that bridges the gap when individuals are linked through economic development centers to create innovative new businesses. The theoretical framework included professional culture, informal and incidental learning, boundary-spanning, and resource linkage. Analysis of 82 critical learning incidents yielded findings in both functional and bridging learning, highlighting the role of context design.

Keywords: Informal Learning, Professional Culture, Resource Linkage

The diffusion of technological innovation can deliver great benefits to individuals and to society in the form of wealth, employment, infrastructure, and products and services of all kinds, as well as at least partial solutions to problems of disease, pollution, isolation, hunger, illiteracy, and natural disasters. The complete cycle of technological innovation is complex and requires an array of talents, including the entrepreneurial development of the idea as well as the financial investment acumen to understand and effect marketplace success. Thus, the speed and success of the innovation depend on collaboration between entrepreneurs and investors, which can be inhibited by their prior socialization into different, even adverse, professional cultures. Culture itself is largely a product of incidental learning, that is, a schema of attitudes, habits, and heuristics formed primarily as the result of association with cultural "veterans," not through deliberate study or instruction. Learning that can bridge professional cultures is equally a product of incidental learning, which can occur as entrepreneurs and investors interact and consider mutual interests in the context of advanced technology economic development centers, often called small business incubators. The central concern of this study was the function of these economic development centers -- specifically publicly-funded organizations that work in the common interest -- in creating and maintaining environments for the incidental learning that bridges professional cultures, thereby facilitating innovation and its societal benefits.

Theoretical Framework and Literature Base

A theoretical framework was fashioned for this exploratory study combining elements of its "parent" disciplines, professional culture and informal and incidental learning, as shown in the clear circles in Figure 1. Within the area of professional culture, the focus of the study was entrepreneurs (specifically technology entrepreneurs) and investors (primarily venture capitalists). As shown , there was already an overlap, demonstrating a recognition of their interdependence in building new, successful firms based on technological innovation. To grasp the essence of a profession, both the attribute approach (Van Maanen & Barley, 1984; Trice, 1993; Dean, 1995; Raelin, 1997; Brien, 1998) and the power approach (Bloor, 1994; Rusaw, 1995; Boje, Fedor, & Rowland, 1992) to definition were studied, leading to conclusions that entrepreneurs and venture capitalists:

- Display some of the characteristics of a profession, but are more accurately considered *professional groups*, not professions, for purposes of this study.
- Are alike in some ways (for example, in being expert decision makers and relationship builders) but unlike in the critical area of *agency*, in that entrepreneurs risk all to be owners of their piece of the world, whereas venture capitalists are typically the well-rewarded agents of others.

Significantly, as the study proceeded, the accumulation of findings around a third professional group, the senior staff of the economic development center, made it desirable to add them as an additional focus. To better understand the challenges and activities of this group, additional reading and analysis was done in the areas of boundary spanning (Aldrich & Herkner, 1977; Callahan & Saliponte, 1979; Friedman & Podolny, 1992; Keller & Holland,

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1975; Lawrence & Lorsch, 1986; Powell, Koput, & Smith-Doerr, 1996; Tushman, 1977) and resource linkage (primarily Havelock, 1976; Havelock & Zlotolow, 1995).

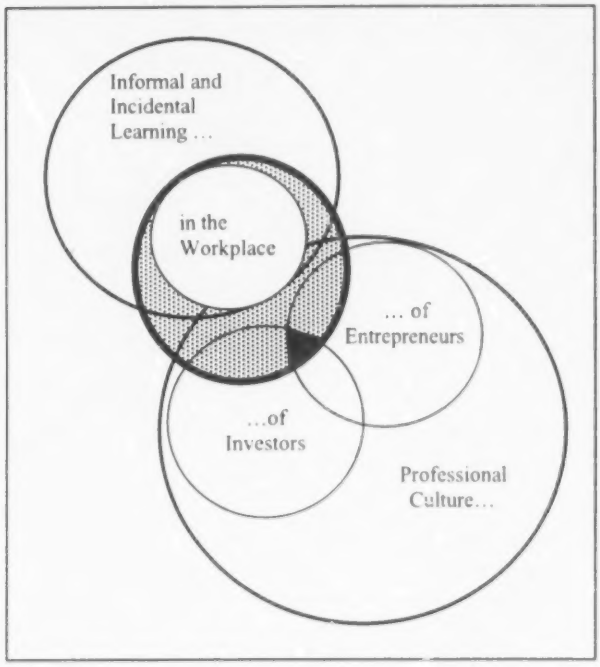

Figure 1: Overlapping and Extending Theoretical Frameworks

Informal and incidental learning apply to all of life's aspects, but this study focused on workplace experiences. Among the most prominent writers in this area are Watkins and Marsick (1990, 1992, 1997), who defined informal learning (with incidental learning as a sub-category) as location-neutral, based on the learner's experiences, non-routine, often tacit, and highly contextual. Others (Bruce, Aring, & Brand; 1998; Rossing, 1991; Zemke & Tough in Howe, 1991) reported that the great majority of workplace learning is informal. For purposes of this study, incidental learning was differentiated from informal learning, with the distinction hinging on learner intent (see Ellinger, 1997). Marsick and Watkins again established the definition -- "[incidental learning is] a byproduct of some other activity, such as task accomplishment, interpersonal interaction, sensing organizational culture, trial-and-error experimentation, and even formal learning (1990, p. 12) -- drawing support from Dewey's interpretation of the problem-solving method, an iterative interplay of conscious and unconscious learning routines, checked by reflection. Additional segments of this literature examine networking, workplace socialization, and communities of practice.

The gray area in Figure 1 refers to the expansion and integration of the applicable segments of the two major streams of literature. One intent of this research was to extend the existing theory base of informal and incidental learning further into the domain of scholarship about professional culture. The black wedge portrays the specific starting place -- where the context of activities at economic development centers facilitates learning by entrepreneurs and investors to communicate and work effectively together. This area was sparsely populated, but included researchers of the intra-corporate interface between marketing and R&D (Gupta & Rogers; 1991; Moenaert, Meyer, Souder, & Deschoolmeester, 1995; Moenaert & Souder, 1996; Song, Neeley, & Zhao, 1996; Souder & Chakrabarti, 1978), by Starr's work on organization formation (Larson & Starr, 1993; Starr & Fondas, 1992), and by Cable and Shane's 1997 characterization of the entrepreneur-investor relationship as a "Prisoner's Dilemma."

Finally, two key components of the context that permits, requires, enhances, and validates bridging situations completed the theoretical framework of the study: the venture capital decision-making process, underlying the early stages of the life cycle of the association between venture capitalists and entrepreneurs (see, for example, Fried & Hisrich, 1994; Hall, 1989; Tyebjee & Bruno, 1984); and business incubators, characterized as "innovation brokers." Such incubators are not directly involved in technology or product development, but provide low-cost work space, shared administrative and advisory services, and, increasingly over the last decade, educational and developmental programs for the resident start-up companies. According to the National Business Incubator Association Internet site (www.nbia.org), the U.S. has over 600 business incubators, housing over 19,000 companies, over half being urban or suburban public or private not-for profit entities, and one quarter specializing in technology clients.

Purpose of the Study and Research Questions

The purpose of this study was to describe incidental learning among members of divergent professional cultures linked through advanced technology economic development centers to collaborate in creating innovative new business organizations. The inquiry was driven by two central questions:

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1. What is learned in critical incidental learning episodes by key participants of advanced technology economic development centers?
2. What environmental factors, such as interactions, design features, and contextual factors facilitate the learning?

Methodology

A qualitative case study was conducted at a state-funded advanced technology business incubator in the southeast. Sixteen semi-structured interviews of the senior staff of the incubator and of entrepreneurs and investors identified by them as highly involved learners elicited 82 critical learning episodes. The Critical Incident Technique (CIT) was selected to help participants quickly and vividly recollect past experiences and to focus on describable specifics, such as their own behavior and thoughts before, during, and after an incidental learning experience. In addition, the CIT is widely valued for its ability to enhance data credibility (see Cseh, 1998; Ellinger, 1997; Stano, 1983). Content analysis, the constant comparative method, and narrative analysis were used in combination for data analysis and reduction. Specifically, content analysis was a non-intrusive and powerful aid in identifying and characterizing emergent themes; the constant comparative method served to repeatedly test the influence of new data on provisional categories and themes; narrative analysis preserved the social nature of the learning experiences and the interviews and balanced the fragmentation introduced by the content analysis.

Three questions tested the significance of the findings: How directly connected is a finding with the research questions? Did most members of all three groups addresses the theme? Was the learning self-described? To maximize the credibility and trustworthiness of both the research process and its outcomes, several measures were used, especially triangulation (of data collection, data analysis, and theoretical frameworks) and consultation (member checks, peer reviews, an intercoder reliability process, and reviews by Dissertation Committee members and other faculty). Also, a robust audit trail was maintained, including a record of procedures and logistics, tracking of the entire analysis and interpretation effort, and a personal journal of expectations and reflections.

Findings

Findings emerged in two broad clusters, mirroring the research questions.

"What Was Learned" Findings

Six categories of learning were described, including the functional and bridging learning reported by the three professional groups who collaborate within the incubator environment. Functional learning was defined as *the acquisition of knowledge instrumental in achieving mastery in one's work performance*, with the proviso that different kinds of mastery would be sought by each professional group. For entrepreneurs, functional learning focused on the essentials of business viability, and incidents recounted by this group dealt with enhanced self-knowledge, appreciating the need for the talents and energies of others, and understanding and meeting the requirements of organizational leadership. Investors' functional reflected on what makes an investor most effective, and their incidents dealt with constant attention to time and efficiency, efforts to achieve good fit among team members, and clarifying the positive difference they made to new companies. For staff members, functional learning meant operationalizing the mission of the economic development center. In their accounts, critical incidents dealt with continually updating the admissions criteria, keeping an eye on the Big Picture, and learning to be investor surrogates to promote critical learning among their clients, the member companies.

Less common but more central to the purpose of this study was evidence of bridging learning, described in this study as *the acquisition of knowledge, skills, and attitudes during and as the result of bridging situations. Bridging situations are the bounded phenomena, comprising both the exertion and the result of conscious and unconscious efforts, that enhance empathetic understanding of another's meaning.* Members of all three groups reported incidents of bridging learning. Some entrepreneurs gained deeper understanding of how investors assess them and the opportunities they represent and how to approach investors as potential collaborators. Many entrepreneurs revealed some level of the acceptance of the relative power positions between them and investors. On their part, several investors related problematic incidents containing unspoken -- and often faulty -- assumptions about entrepreneurs, which had led them to take responsibility for acknowledging and checking out assumptions. Investors also recounted incidents wherein they experienced the risk of over-attachment to entrepreneurs and to the intriguing business ideas developed by them. Bridging learning among the staff members related to their interactions with

entrepreneurs, specifically, the occasions where the need to be simultaneously encouraging and tough proved difficult. In addition, they dealt with the counter-intuitive choice to render more assistance to those who were already on the fastest track.

Environmental Circumstances Findings

The original categories implied by the second research question -- Interactions, Design Features, and Contextual Factors -- were modified during data analysis. The final set included Formal Design Features, Informal Design Features, and Contextual Factors.

The first category, Formal Design Features, encompassed the activities that occur at or are the responsibility of the incubator according to its charter and mission. One key theme examined how the staff goes about its work at the center -- by doing a great deal of preparation in the background and being continually ready to deliver "just-in-time" service with a light touch to their clients. Within a theme labeled Missed Opportunities, evidence was presented primarily from entrepreneurs' and investors' viewpoints highlighting areas that require more concerted effort by the incubator's management and staff or even changes in direction.

Informal Design Features are experience-based attributes of the economic development center. The first of two themes in this category described the Culture of Dialogue as experienced by the participants. Although data analysis connected with the second research questions was performed with no intent to differentiate among the professional groups, certain distinctions emerged when this theme was probed. For example, whereas staff members and entrepreneurs tended to characterize the interactions as organic, safe, and reciprocal, the investors emphasized their need to establish boundaries and maintain the distance of objectivity. Furthermore, members of each group offered a view of their role in interactions that was common within but distinct across the groups. The staff suggested that their role was primarily as helper, sounding board, and encourager. Entrepreneurs almost universally remembered their role as learners and seekers. Finally, the investors in the study portrayed themselves as evaluators and sources of expertise and access to key resources.

The final environmental circumstances category was Contextual Factors, referring to elements beyond the boundaries of the economic development center that influence it and its inhabitants, such as individuals, institutions and political, economic, social, or demographic forces. The first theme alluded to the quickened pace and heightened expectations of the Internet Economy, a global phenomena that has particular and daily influence on incubator participants. Finally, a relative lack of sophistication and insufficient access to both capital and culture was seen to characterize the metropolitan area that surrounds the incubator. In this study, this theme was portrayed by several interviewees under the heading "This ain't the (i.e., Silicon) Valley!"

Conclusions, Implications, and Recommendations

Three broad conclusions were drawn from the study.

1. *Incidental learning outcomes were evident in new competencies as well as in new attitudes.* In this connection, a pre-existing but unarticulated assumption -- that bridging, i.e., paradigm alteration, was necessary to a favorable business relationship across different professional cultures -- was recognized and discarded for lack of evidence. Furthermore, the importance of interaction between intentional and unintentional learning (see Figure 2) was underscored as well as the critical role of reflection in enriching problem-solving capabilities and self-awareness.

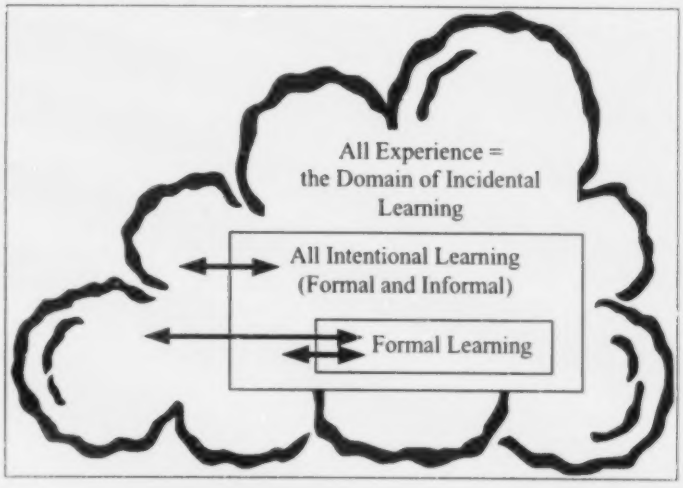

Figure 2 - Interactions of Formal/Informal and Intentional/ Incidental Learning

2. *Group identification persisted after bridging learning.* Evidence of bridging learning occurred in all groups, but no evidence indicated that the experience eradicated group identification. There was no hint of the emergence of a new, blended group, nor had this been expected. Importantly, the specifics in the bridging learning accounts by members of each group were discernibly different; furthermore, self-described role identification was cohesive within groups and dissimilar across groups. Viewed from a different angle, however, the very nature of bridging learning led to the conclusion that those who experience it became more alike in a way that transcends professional boundaries. Regardless of which group they are identified with, they develop their capacity to empathize with patterns of thought and response typical of another group. If this kind of learning is considered growth -- for example, that these individuals are likely to possess more self-awareness, empathy, flexibility, and maturity than those with less examined lives -- it is somewhat at odds with the concept of growth as discussed in the professional culture literature. For example, Trice (1993) and Van Maanan and Barley (1984) characterized professional career advancement as moving toward the center of the profession, becoming increasingly an insider as well as increasingly separate from other groups and the general public. Further study and reflection are needed to determine which capability -- to be able to bridge professional cultures or to become more archetypal of one's own profession -- is more likely to propel a practitioner toward greater professional effectiveness and success.

3. *"Bridge Building" itself is an emerging professional group.* The distinctiveness of the functional and bridging learning experiences of the incubator staff illustrated that their job might well be viewed as a professional endeavor in itself. Analysis of the "linker" group according to the same attribute model applied to the other professional groups revealed comparable -- and perhaps greater -- levels of autonomy, commitment, collegiality, education, service orientation, and expertise.

Implications for Theory and Practice

Regarding incidental learning in the workplace, specific attention to the context of learning has been, until recently, lacking. Very recent work by Cseh, Watkins, and Marsick (1999) re-conceptualized Marsick and Watkins' model of informal and incidental workplace learning to include the learning context. "Based on [Cseh's study of Romanian managers], it is clear that the context permeates every phase of the learning process -- from how the learner will understand the situation, to what is learned, what solutions are available, and how the existing resources will be used in the learning process" (Kuchinke, 1996, p. 12-1). The focus on the environmental circumstances of participants' incidental learning in the current study increased the scope of the research in this direction. In addition, the findings of this study potentially add a new dimension to the model recently produced by Holton and Swanson (1999), portraying two layers of contextual factors (Individual/Situational Differences and Goals/Purposes for Learning) surrounding adult learning efforts (Figure 3). Holton and Swanson's outer layer differentiates between the learning intentions of the individual, the institution, and society. The separability of learning intent -- at least between the individual and the institution, with the possibility that the institution is executing a societal mission -- from learning enacted is central concept of this study. Particularly during data analysis, it was productive to probe the learning dynamics in the environment within and surrounding the economic development center with questions such as

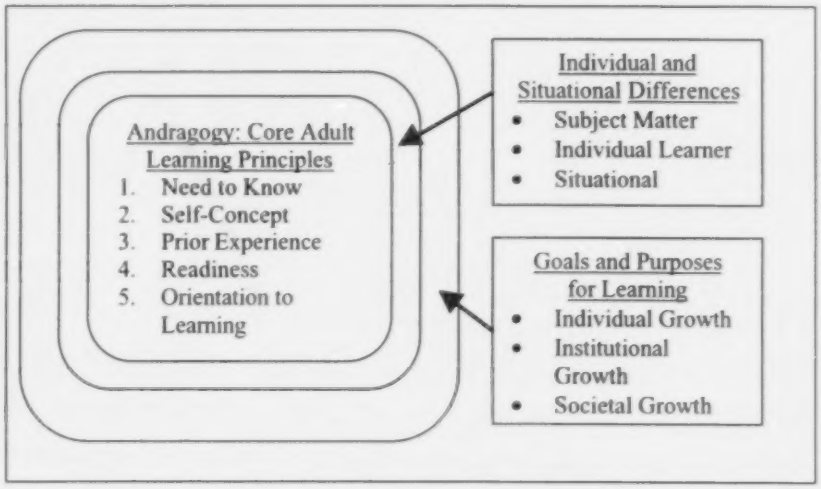

Figure 3 - Andragogy in Practice (from Knowles, Holton & Swanson, 1998)

- Who is intending to learn what?

- Who has the intention that someone else will learn, and what?
- What is learned because it was intended?
- What is learned besides what was intended?
- What supports learning that one party intends for another?

New insights might emerge from a review of existing research performed with questions such as these in mind.

Regarding the Resource Linkage Model, outcomes of this study suggests an extension of the problem-solving resource linkage model as put forth by Havelock *et al* (1976). The extended model (Figure 4) shows that a resource system can have relationships with more than one client system. The solid vertical arrow indicates the support that the resource system gives to the relationship between the several client systems. In the current study, of course, the resource system was the advanced technology economic development center, and the client systems were -- or could be -- individuals and organizations in the other two professional groups. There was ample evidence that the staff of the center viewed the entrepreneurial companies as their clients, but the relationship with the investment community was ambiguous. The new model suggests that the center not only can but should consider viewing investors as another client system set. In doing so, they would play a useful role in supporting the relationship between the two other professional groups that share the learning environment.

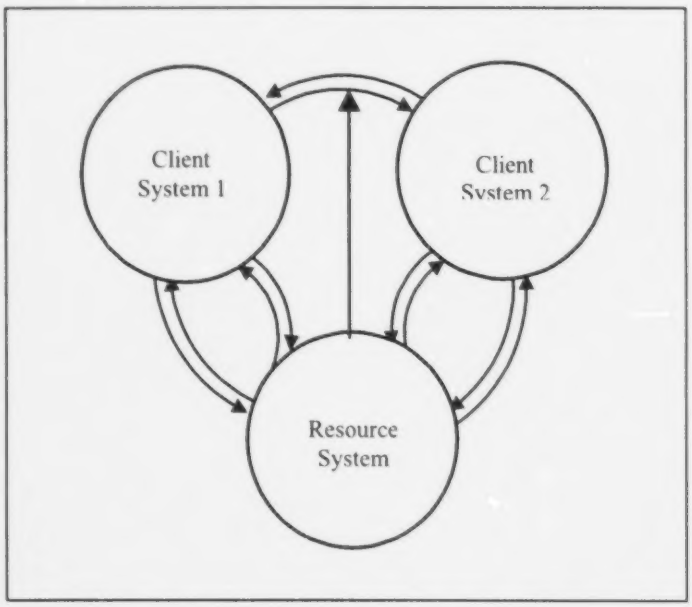

Figure 15 - Extended Problem-Solver Resource Linkage Model
(Based on Havelock *et al*, 1976)

Implications for practice include new approaches to program development, staff development, and physical layout at economic development centers and other entities that constitute bridge-building learning environments. For example, efforts can be made both to broaden participation in programs, fostering greater contact among members of the diverse professional cultures, and to include more opportunities for reflection on experience in these contacts. Developmental programs for the incubator staff could sensitize them to their linkage role and establish both a vision and techniques to enhance their performance. Finally, a new awareness of the importance of the setting could prompt incubator management to increase opportunities to experience the "karma in the walls and halls," to congregate in impromptu meetings, and to share in the folklore and spirit of the extended organization.

Recommendations for Further Research

Broader and deeper findings would result from additional qualitative study (such as comparative case study, ethnography, and longitudinal study) of the same and similar populations; from quantitative surveys to be developed when categories and sub-categories have stabilized; and from action research projects involving one or more professional cultures in the same or similar settings. In addition, it would be worthwhile to consider how the ground covered in the current study could extend into cyberspace. The number of internet-based "virtual incubators" is proliferating steadily, sometimes augmenting the reach of a physical incubator and sometimes standing alone. Such a study would delve into critical questions of professional culture, incidental learning, and the role of interpersonal interactions when participants seldom or never meet face to face. Finally, the same research design could also be extended to different populations, as there are many situations that call for bridging learning, whether or not it is

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facilitated by third parties. This is increasingly the case as economic globalization and technological developments of all kinds continue in overlapping waves to reshape the workplace and interorganizational relationships.

Additional study in professional culture is also called for, because the findings of this study offer a portrayal of professional growth that differs from prevailing, inwardly-focusedconcepts. As discussed here, bridging learning helps individuals to transcend professional boundaries, be more self-aware, and behave more flexibly than those without it. As this notion appears to be new ground, an exploratory, qualitative study, involving in depth interviews with successful professionals, is needed to provide new insights about alternative pathways to professional achievement and begin a new research agenda.

Contributions to HRD

The principal contributions of this study to the HRD discipline are

1. *An emerging definition of a learning environment* that can be designed and managed as a context for incidental learning in the workplace, for which HRD professionals will have advisory and possibly primary responsibility.
2. *Modification of the Resource Linkage Model*, providing for multiple Client Systems served by a Resource System. Again, HRD professionals are positioned to adapt and expand this model to particular organizations.
3. *Empirical results available to faculty and researchers in human resource development* -- as well as in fields such as adult education, the sciences, engineering, business, and entrepreneurship -- particularly as they support cross-disciplinary educational offerings. For example, opportunities might be created that bring together students in technology fields, in business and management fields, and in human resource and organization development to begin the bridging of professional cultural gaps between them.

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Independent Workforce Theory: Implications for HRD

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An emerging theory of an independent workforce presents profound implications for human resource development (HRD). The theory contends that advancements of technology, coupled with the globalization of industrial and commercial activity, is empowering a highly educated, independent workforce, significantly altering the relationship between management and labor. An independent workforce will impact the practice of organization development as well as personnel training and development.

Keywords: Independent Labor, Global Labor, Self-Directed Learning

The US marketplace in the post World War II years easily accommodated domestic and international enterprises that had distinct and separate economic activities. From its ascendant perch atop the global economic structure, the US dominated development, determined the rules of international trade, garnered raw materials from third world countries, and converted them into consumer and military products. The economics of competition finally overwhelmed political systems, converting autocratic regimes into consumer-driven societies, and spreading a new technocratic philosophy from Europe to Asia. Fundamental changes are now redefining the nature of the management-labor relationship, creating a fertile arena for developing theory that can focus HRD contributions toward a new potentially egalitarian world economic order.

While some industrial and commercial sectors have been influenced throughout modern times by international economic forces, domestic enterprises formerly subject only to local and regional market considerations are now confronting the reality of a new human resource capital that is increasingly determined by global economic and political forces.

Technology as an Equalizing Agent

> *The new employment contract falsely promises that employees will be made employable over their lifetime in exchange for an elimination of the employer responsibility of providing lifetime employment. (Ettorre, 1996)*

Technology has emerged as an empowering force for labor, enabling the spread of information previously closely controlled by political forces–including professional organizations and educational institutions. Outsourcing has become an equalizing economic force, increasing the standard of living in many countries once considered third-world economic forces. Regardless of political system, both Asian and European entities have captured an entrepreneurial spirit, driving changes that empower workers. The equations that have empowered the American contingent force might one day have a similar global impact.

The Skill Set. US American workers have discovered for themselves that a down-sized corporate world requires self-training to ensure continued success. Workers are increasingly recognizing that their combination of marketable skills increases their ability to compete individually for jobs that change radically as corporations respond to national and international market pressures. At the same time, the use of technology internationally is also providing the same opportunities for workers in other countries, including the emerging third-world.

The Internet. The randomness and independence of the marketplace is best represented in the growth of the internet, providing a communicator not just of information, but eventual access to global labor markets for everyone with skills that can be matched to job requirements. The cross-cultural implications of technology transfer need to be researched as an emerging change mechanism.

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Emergence of Contract Labor

As Etorre (1996) noted, the employer-employee concept of commitment has evolved with the need for corporations to respond quickly to changes in the marketplace. Pfeffer (1995) maintains that companies can still cultivate a relationship with workers that will serve both corporate and individual needs, though he recognizes that independent contracting is changing the relationship between management and employee. That movement is represented in the widely-held US managerial philosophy that champions lean organizations. Contract labor is a reversion to pre and early-industrial revolution business relationships, where individuals were paid for individual craft work or contracted to work by industrialists.

Internationalization of the Work Force.

Troopers realized . . . the old trucks were occupied by young Mexican men, recently arrived in this country and working to repair storm-damaged roofs . . . officers turned over 13 illegal immigrants from Mexico . . . to the INS for deportation .(Minneapolis StarTribune, August 6, 1998)

Political forces and transnational business are also contributing to change in the character of the work force. Intermittently viewed as exploited labor, third world employees generating products for the international market are nonetheless increasing the standards of living in their own countries. Recent pressures on US textile industries and shoe manufacturers by political entities have driven recognition of worker conditions and grievances beyond US borders. More effective international unionizing may not be far behind, as pacts among hemispheric NAFTA countries honor provisions for workers established by treaty, and other applicants to that trade alliance will also be subject to such provisions. Similarly, the European Union is altering the management-employee equation as economic borders disintegrate. International labor accords that recognize standard conditions of labor accelerate the formation of an independent workforce.

The Virtual Company. Labor mobility is further achieved with the emerging virtual company, where employees can work on computer systems anywhere in the world. Invoices and payment for services will be electronically transferred for work that is electronically created and submitted. International protocols to supervise the traditional work experience now become irrelevant, insofar as the world wide web is uncontrollable in its present form. Global benefits administration, universal health insurance, and pension development are areas where economic, social science, and political research needs to be initiated. The emergence of an independent workforce drives the need for that research.

The Independent Workforce Theory

The knowledge worker represents a class of laborers who will harness technology to create self-directed work channels that will cross national frontiers independent of transnational companies and regional political alignments. The emergent independent workforce will redefine the relation between employers and workers.

Corollary 1. Economic and political mechanisms will emerge that support portability of worker benefits across national frontiers. Such benefit vehicles will be regional and may function through trade organizations, intergovernmental bodies, industrial or commercial alliances, transnational labor unions, or labor broker cooperatives.

Corollary 2. The evolving labor-employee relation based upon knowledge work will generate self-directed employment opportunities for other classes of labor; the emergence of independent labor among broader classes will further dissolve national boundaries.

Corollary 3. Regional political alliances will recognize independent workforce relationships within their boundaries and will seek competitive advantage over other regional alliances. Regional economies will function according to the availability of human capital to freely respond to changing competitive forces and needs among regional elements.

Definitions. Independent workforce labor is defined as self-employed contract-for-services work through different agencies, including the worker directly or brokered relationships as further described, below. The knowledge worker is defined as an individual who owns and controls the intellectual tools to perform the service or create the products.

Foundation of The Independent Workforce Theory

The US model of capitalism has finally, and successfully, revolutionized global economics. Instead of political forces leading an economic competition for regional and global power, the relentless forces of capitalism are reducing political competition to an economic equation. The US domestic marketplace has taken a half century to define how work will be conducted, and those economic structures developed by US business now compel adoption of similar mechanisms throughout the international marketplace. Foremost among US business practices is the emergence of a self-directed, self-educated, highly mobile, independent workforce. Driven by the realities of technology that both equalize and empower individuals, US workers are learning how to survive and even flourish in a business world that has traded security and loyalty for portable skills. The lean US corporation of today has placed a premium on worker education, ability, and flexibility. Just as corporations now respond to quickly changing markets, individuals are arming themselves with the tools to compete in that same marketplace, creating a highly-trained and mobile employee pool.

The current contract laborer is generally a knowledge worker whose skills command a premium price both in the US and abroad. The tremendous growth of broker organizations in the service industry is a testimonial to the changing management-employee relation. A premise of this theory is the upgrading of the notion of supply and demand, where independent labor both represents and uses technology to identify opportunities globally, then contracts its services directly to transnational employers or through broker organizations. A corresponding market mechanism will emerge that develops and regulates labor benefits that are globally portable, helping to define a new economic role for regional or international political entities.

Is The Independent Workforce a Viable Theory?

This section critiques the emerging theory of an independent workforce against the seven requirements that Patterson established for a theory (1986, xxi-xxiii):

Importance. The phenomenon of a developing cadre of knowledge workers who negotiate their own cross-frontier working arrangements has profound implications for the future hemispheric trade. Portability of benefits, pension plans, training, and credentialling are developing as significant issues among trading partnerships and alliances. The need for a theory to adequately explain this phenomenon easily meets Patterson's test.

Preciseness and Clarity. The notion of an independent workforce suggests commonly recognized conditions: contracting for services is a straight-forward process, subject to host country laws and regulations, and treaty agreements. Data can be collected from contracting companies or from broker organizations; hypotheses about transportability of benefits or worker mobility can also be tested empirically by tracking visas, and so on.

Comprehensive. An independent workforce concept recognizes the essential differences between management and worker as the major defining variable; the self- directedness of the contractor and related working conditions, benefits, and applicable laws should be accessible to rigorous research.

Operationality. Labor statistics available domestically and increasingly so in treaty or alliance countries may confirm how the theory applies in real life to the developing independent workforce. Transnational corporation records also can help test the propositions of the theory.

Empirical Validity or Verifiability. The changing relationship between management and employees begs for redefinition to illuminate the dynamics of international trade and commerce. Outsourcing labor is now commonplace, where companies engage labor for specialized projects, create limited-duration teams, or rely on temporary associations to offset cyclical business. The advent of knowledge work as a broad labor category begs for new theories to explain altered dynamics and to project future efforts.

Fruitfulness. The independent workforce revisits the social theories of the Marxists or 20th century German philosophers who envisioned a self-directed workforce that celebrated the ascendancy of the worker. The theory proposed here suggests a new balance among political and economic systems, where worker expertise equalizes opposing forces, helping to bring about the economic and political equality of the idealist.

Practicality. The ultimate test of the theory's practicality will be the development of the economic and political mechanisms that support a self-directed workforce. Issues of transnational credentialling, portability of benefits, and access to project-based assignments wherever treaties or alliances permit need to be resolved to effectively operationalize the theory.

Introducing Dubin's (1983) notion of boundaries helps to answer Patterson's concern for the practical application, where an independent workforce might encounter geopolitical limitations. Hence, in the European Union, in the Mercosur member nations of South America (Ostroff, 1997), and in NAFTA, member countries have erected portals as well as barriers to free movement of labor, according to regional or hemispheric political considerations.

One such political boundary is demonstrated by NAFTA members Mexico and the US, whose labor laws often conflict with each other, and where national labor laws remain subject to internal modifications that might impact agreements with other alliance members.

Patterson's criteria to measure the utility of a theory provides a sounding board for the emerging theory of an independent workforce, exposing it to initial tests of comprehensiveness and consistency. The theory proposed here is by necessity an emerging one, inasmuch as the phenomenon itself is under development and subject to dynamic political and commercial constraints. The ability of independent knowledge workers to harness changing domestic and international laws to penetrate global labor markets, matched with the increasing labor needs of domestic, national, international, and transnational corporations, presents a set of problems that in their solution will define how work is undertaken in the coming decades.

Toward an Evolving Labor Management

Labor management nees to evolve along with an increasingly independent workforce. This section examines challenges to HRD development of management systems to meet the needs of an emerging independent workforce.

Roots of the New Challenge. Ryan (1998) claims that extensive reorganization and cost-cutting has forced business to look for alternatives to the 'traditional dedicated staff model" (p. A10). Similarly, public managers suggest that a 'decade of downsizing, reengineering, and doing better government with less' has led many government organizations to contract out, franchise, and privatize agency work" (Sumser, 1998, p. 37). These trends are redefining the workforce and how it is used, reflecting the new emerging employer-labor relation. The reengineering of corporate America that Ryan and Sumser cite does more than create a class of labor characterized by contracted work, the outsourcing of service *as well as* manufacturing work, and the emergence of a mobile, often self-employed technical knowledge force; it is also redefining the educational needs of vast populations for the coming decades.

HRD practitioners and educators will be challenged to meet the needs of a redesigned labor force that embraces new criteria for knowledge work beyond the employment standards of recent generations, and where an emerging independent labor force needs skills based on principles of entrepreneurship rather than on the subject-matter expertise foundational to the basic education theory of the past.

International Contracted Labor. Vosko (1998) describes an international struggle over the regulation of private employment agencies whose formal recognition came in the original International Labor Organization charter of 1919 that declared that labor was not a commodity. The Convention Concerning Fee-Charging Employment Agencies (No. 34), adopted by eleven member countries in the early 1930s, became the first international labor standard and served as a framework for countries to develop their own national legislation.

The definition for fee-charging agencies came to include "any person, company, institution, agency or other organization which acts as an intermediary for the purpose of procuring employment . . . [who derives] . . . any pecuniary or other material advantage from either employer or worker"(Vosko, 1998).

Convention No. 96 modified the standard in 1949 to include either *abolition* or *regulation* of temporary help firms. Countries that sanctioned both private employment as well as public employment agencies were to regulate with *mandated* yearly licensing, supervision, fixed-fee scales, and special rules for recruitment and placement.

By the 1950s, temporary help firms evolved generally from market intermediaries who recruited and placed workers in jobs in their own right. By the 1960s, ILO member countries were challenging businesses that "only employed temporary help workers so long as they were engaged by an outside party"(Vosko, 1998).

For the next two decades, ILO members argued about regulating the temporary help firms they viewed as clerical support systems. Conventions 34 and 96 were finally revised into three dominant regulatory models: prohibition, regulation, and non-regulation (Vosko, 1998).

Contemporary Context. Sumser (1998) defines contingent work in four employer categories (38-39):

- Temporary help company: company employees are contracted to clients who supplement their own workforce. The temporary firm recruits, hires, pays, and trains its employees.
- Consulting firm: company specialized services require high independence; may provide advice, services, or studies. Workers may be direct employees or hired through subcontracting firms.
- Independent contractor: self-employed individual performs services similar to those of consulting firms; independent contractors may be seen as "one person consulting firms."
- Professional employer organization: company with formal legal and administrative duties for setting salaries, benefits, and other management functions on behalf of all or most of a client workforce; sometimes defined as "co-employment."

Sumser notes that work has changed from the experience-based jobs dominated by factories to knowledge-based work dominated by the service industry. Vosko (1998) looked at employment forms in European Community and NAFTA countries, suggesting that "few scholars would deny that . . . part-time work, self-employment, contract work and temporary work are on the rise in both Europe and North America."

The industrial revolution concentrated labor in cities where manufacturing jobs eventually transformed an agricultural workforce into one producing and distributing goods. The economy now has professional and service classifications with occupations as diverse as aroma-therapist and personal coach. The evolution continues as independent craftsmen and professionals, for example, are replaced by disposable diapers and discount pharmacies that make diaper services obsolete, on the one hand, and corner drugstores disappear, on the other.

Those same chain discount stores in high-traffic malls and assembly-line producers of disposable diapers are subject, in turn, to advances in technology, management, and distribution that further reduce the labor force. Hence, the employer-labor relation has now come full cycle: the technology and management systems that freed agricultural workers from a reliance on the vagaries of nature and which led to a better standard of living, is now returning workers to the same entrepreneurial labor that characterized their forebears.

Employee Involvement Versus Outsourcing

Ettorre (1996) described "empty promises" associated with the new employment contract paradigm. The promise of internal retraining for employees associated with contemporary downsizing has been generally discarded in practice, according to her analysis, confirming a diminishing employer commitment to workers. Juravich (1996) examines employee involvement in his review of empirical research on labor-management cooperative programs over a 20-year period. His meta-analysis concludes that employee involvement programs are likely to change attitudes, job satisfaction, and improve communications skills that over the long run can contribute to corporate economic performance, provided that management also commits to a jointly-directed effort. Juravich notes that effective employee involvement programs often result in "greater identification of workers with the employer," moving unions to consider such programs a hindrance to new organizing (p. 62).

Weiss (1997) takes a more pragmatic view of contemporary labor-management relations, where job retention in tight labor markets has put a premium on corporate ability to generate attractive salary, benefit, flexible working conditions, and employee opportunities for training and advancement that recognize the importance of a company culture that supports and empowers workers. Foegen (1998) takes the concept of employee self-sufficiency one step further; asking whether "managers are losing control" as he examines a decentralization trend that instead reestablishes managerial control through technology and labor empowerment.

Global enterprise does not equally translate certain labor concepts across national borders. Barth, Karch, and McLaughlin (1997) examined the international retail equation, finding that "differences in consumer preferences, labor shortages, unfavorable tariff structures, and limits on foreign ownership" hinder corporate success overseas. Retail practices and business culture that were successful in one setting did not necessary translate equally abroad, forcing retailers to reorganize operations, alter supplier relationships, *"outsource certain activities*," and develop international management teams. Other industries have experienced similar barriers, as reported by Learmount (1997), who relates flight industry anxieties regarding labor outsourcing for what he terms "non-core services" such as maintenance and repair operations.

Barton and Bishko (1998) examine global mobility from an HR perspective, focusing on different types of expatriates and assignments. They contrast home country-based compensation packages with the host country-based packages and examine how outsourcing of project management helps solve discrepancies between available resources

and project requirements. Their central concern is the relocation of expatriates and how management can learn to more effectively use expatriates while maximizing their international career opportunities.

Finally, Cordon, Vollmann, and Heikkila (1998) examine outsourcing in terms of core activities versus non-core activities. They evaluate outsourcing through two theoretical frameworks, one based upon a competency model, the other upon a risk / effectiveness model. Some business units may regard certain tasks as core activities, but other units may not, tending to "oversimplify" outsourcing decisions that may greatly impact a company's productivity.

Implications for HRD

HRD theory must expand or adapt if it is to incorporate the evolutionary independent workforce theory in the primary HRD areas of organization development and personnel training and development. The re-emergence of contracted labor, now defined in technological and global terms, will force HRD to respond to employment modalities better suited to the 21st century than to the 20th. The following lines of inquiry might be fruitful for researchers.

The Independent Workforce and Organization Development. Organization structures must address the needs of an international contracted labor force. Contemporary organization models (Bartlett & Goshal, 1990; Cherns, 1987; Cummings & Worley, 1993; Luthan, Marsnick, & Luthans, 1997; Rothwell, et al., 1995) include the matrix organization, the socio-technical organization, the conventional functional (hierarchical) model, multinational cooperatives, the broker organization, and the hetarchy (Solvell & Zander, 1995). Independent labor mechanisms might need different organization processes or functional links, some better suited to regional or hemispheric political economies than to a universal application.

The hetarchy is conceived as a structure ideal for incorporating cross-cultural differences into organization processes (Wolf, 1997). Cross-cultural determinants may be overlooked in the rush by companies to expand internationally, and ill-prepared employees increase the cost of doing business abroad. Notwithstanding the effectiveness of employee training, a dilemma for Human Resources remains where organizations do not recognize the need for an independent workforce to access health care, pension plans, and so on. European political entities have acknowledged such a need, and use a common market concept to bring economic change about. HRD can spearhead such change by creating a model that surpasses the European vision, combining the performance needs of transnational corporations with the emerging requirements of an independent workforce.

The Independent Workforce and Personnel Training and Development. The preceding sections have outlined a developing theory of an independent workforce based on emerging technology and knowledge transfer across national frontiers that empower individuals through education, economics, and political change. As individuals assume greater responsibility for their own education needs–some borne of necessity because of transnational corporate project-orientation, others because of the equalizing influences of technology–the need for continued training likewise becomes a greater issue for corporations.

Companies who react to marketplace change through abrupt changes in the workforce are continuing to alter the management-employee equation that was once celebrated for its personal commitment. The contingent work force that meets domestic US labor needs now evens out the business cycle for many US companies. As that model extends internationally, global firms will increasingly rely on contingent or contracted labor for short and long-term projects. Whether building a nuclear power plant in Saudi Arabia or developing a disaster plan for a Peruvian bank, contracted labor supplies the knowledge and skills for both projects. HRD must now help companies provide training to meet short-term corporate needs wherever they may be, at the same time generating education theory that empowers students at all levels.

The Independent Workforce as a Critical Outcome

Employee benefits that evolved over decades of organized worker effort are being erased by the new worker-employer relation that uses contingent labor concepts to reduce company-sponsored benefits. As business and industry redefine human resource systems to accommodate a fluid and flexible workforce, the streamlining of their work processes has created a burgeoning class of low-benefit workers. What will the new workforce look like?

Defining the New Contingent Workforce. Vosko (1998) categorizes how some companies incorporate emerging human resources practices that are defining the new "labor flexibility":

- Numerical flexibility: use of part-time, contracted, temporary, and casual workers.
- Functional flexibility: cross-training "core" employees to cover varied tasks.

- Distancing: shrinking core group size, meeting work needs with subcontractors.
- Pay flexibility: adjusting rewards to polarize numerically / functionally flexible workers.

Labor flexibility practices are meant to enhance corporate efficiency and increase competitiveness by lessening numbers of workers in core positions where pension, medical, and other benefits were typically accrued over years of employment with the same firm.

While companies are adopting flexibility practices that remove worker protections, the US is decreasing its governmental regulation in many sectors. Major industries are now deregulated, a movement originally conceived to heighten competition and lower prices. Competition has increased, with lower prices one result, and reduced benefits for laborers, another. A continuing decline in customer satisfaction speaks to a population less able to meet essential and basic standards of service (Pedersen, 1997, p. 56). The competition that has driven US American business to tighten investment in human resources has had the effect of slowly transforming the nation's employees into a self-directed workforce. Workers who used to rely on company training throughout their work life-cycle must now learn to capture their own training to assure survival.

Further Investigation. Further research is needed to explore how transnational corporations use outsourced labor. Some organization models recognize cultural determinants in filling temporary positions, such as those cited by Stauffer (1998) about understanding Latin values, while others examine unionization across frontiers (Rose, 1997). Other analyses must determine how empowerment of individual workers will change the employment equation in transnational corporations, including the impact of independent contracting beyond the knowledge worker. Can barriers among trade alliances and regional commercial *ententes* be removed so workers can join an independent workforce where both organization and individual flourish?

Conclusion

This paper has proposed a theory of an emerging, independent workforce that represents a new tension in domestic and international employment. US American-style business has come to dominate global commerce, transforming the economics of employment and redefining financial practices world-wide. The outsourcing revolution in business and the re-emergence of entrepreneurial labor are creating new challenges for HRD in both organization development and personnel training. In response, practitioners must decide whether they will support the new human resources models of business and industry or instead help to create a self-directed, independent labor force that has the tools to equalize the employer-labor equation.

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